

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-69 (Cancelled).

70. (New) A method for obtaining mature, terminally differentiated human cells with enhanced biological function comprising culturing a mature terminally differentiated human hematopoietic cell composition under physiologically acceptable liquid culture conditions, said conditions including replacement of a liquid culture medium at rate of from 50% to 100% daily replacement for a cell density of from  $1 \times 10^4$  to  $1 \times 10^7$  cells per ml of culture for more than one day and for a time sufficient to obtain mature, terminally differentiated human hematopoietic cells with enhanced biological function,

wherein said enhanced biological function is relative to the biological function of the mature, terminally differentiated human hematopoietic cells that are cultured in a static culture.

71. (New) The method of claim 70, wherein a human hematopoietic cell composition enriched in human T-cells is cultured.

72. (New) The method of claim 70, wherein the culture medium is continuously perfused at a ramped rate proportional to the lactate concentration and/or cell density to replace the culture medium without substantial dilution of the cell density.

73. (New) The method of claim 70, wherein the mature, terminally differentiated human hematopoietic cells are cultured for at least 2 days.

74. (New) The method of claim 70, wherein the culture medium contains at least 1 growth factor which stimulates the proliferation of the cells.

75. (New) The method of claim 70, wherein the cultured mature, terminally differentiated human hematopoietic cells have enhanced replicative potential.

76. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises at least one member selected from the group consisting of secretion of substances, cell-cell communication, receptor expression on the cell surface, cytolysis, antigen presentation, antigen processing, an ability to home *in vivo* to sites for function, and an ability to proliferate leading to development/regeneration of tissue.

77. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises increased release of cytokines.

78. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises increased cytolytic activity.

79. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises secretion of substances.

80. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises cell-cell communication.

81. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises receptor expression on the cell surface.

82. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises antigen presentation.

83. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises antigen processing.

84. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises an ability to home *in vivo* to sites for function.

85. (New) The method of claim 70, wherein the biological function enhanced in the cultured mature, terminally differentiated human hematopoietic cells comprises an ability to proliferate leading to development/regeneration of tissue.

86. (New) The method of claim 70, wherein the mature, terminally differentiated human hematopoietic cell composition comprises a cell selected from the group consisting of megakaryocytes, neutrophils, basophils, eosinophils, tumor specific cytotoxic T lymphocytes, cytokine induced killer cells, antigen presenting cells to tumors, and antigen presenting cells to infectious diseases.

87. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises megakaryocytes.

88. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises neutrophils.

89. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises basophils.

90. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises eosinophils.

91. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises tumor specific cytotoxic T lymphocytes.

92. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises cytokine induced killer cells.

93. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises antigen presenting cells to tumors.

94. (New) The method of claim 86, wherein the mature, terminally differentiated human hematopoietic cell composition comprises antigen presenting cells to infectious diseases.